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## SPECIAL ARTICLES

### THE DIRECT SMEAR IN THE DIAGNOSIS OF ACUTE THROAT INFECTIONS

F. W. LUNEY, M.D., D.P.H.

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A. GRANT FLEMING, M.D.

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## The Direct Smear in the Diagnosis of Acute Throat Infections

F. W. LUNEY, M.D., D.P.H.

*London, Ontario*

WHEN asked to present a paper before this section of the Canadian Health Association, I rather hesitated to select the subject of "The Direct Smear in the Diagnosis of Acute Throat Infections", believing it to be a paper more suitable for the General Practitioner rather than the trained laboratory worker. Upon some reflection, however, I felt that this subject might provoke some discussion and perhaps create a little interest in this important diagnostic procedure. In the whole field of Public Health Laboratory work there is nothing more urgent than the bacteriologist's opinion on exudate removed from a patient suffering with an acute sore throat. The physician desires an early report for upon the diagnosis rests, not only the method of successfully treating the sick, but the procedure adopted in preventing the spread of the infection. In such cases the laboratory worker shoulders a great responsibility, and it is his duty to provide the physician with all the available information in the shortest possible period of time. Many physicians will not take advantage of laboratory culture because they believe, and rightly so, that it is dangerous to wait upon an 18 hour culture when the patient has symptoms clinically resembling diphtheria. By offering the physician an immediate opinion through a direct smear from a throat swab we not only assist the physician in his problem by saving him 12 to 18 hours' time but encourage him to bring to the laboratory for examination swabs from all cases with acute infections of the throat. The practical efficiency of any laboratory is reflected in the amount of such work that is referred by the General Practitioner.

The direct smear, of course, is by no means a new method of gaining information from patients suffering with acute throat infections. Long before the introduction of modern methods of producing bacterial

growth, the early investigators in the field of bacteriology forty years ago studied smear preparations of stained and unstained exudates, and from them gathered a vast amount of valuable information. Later, however, when the science of bacteriology became more established and methods of cultivation were introduced we gradually find the direct smear taking a second place to the more technical and precise cultural methods. Here I have particular reference to examinations in acute infections of the throat. A review of the literature of the past few years indicates that much attention has been devoted to methods of diagnosis in throat infections, but, peculiar to relate, very little space has been employed in discussing the value of direct smears in diagnosis.

In the October, 1919, number of the *Annales De L'Institut Pasteur* Dr. P. F. Lamary pointed out the value of the direct smear in not only hastening a diagnosis in diphtheria but also giving information on other types of acute throat infections. Using Neisser's stain he was able to demonstrate the diphtheria bacillus by direct smear in 65 out of 100 cases of clinical diphtheria. Cultures were positive in 78 of the 100 cases. In the 35 direct smears that were negative he was able to recognize the organism of Vincent's angina once, pneumococcus twice and streptococcus 20 times. In conclusion he says: "From both the Therapeutic and Hygienic point of view it is important to give a great deal of attention to the microscopic examination of direct smears made with pharyngeal secretions."

An article by Bleyer (1) is based on direct smear examinations of 70 cases of diphtheria using 70 other non-diphtheritic cases as controls. He used both Ponder's and Greenthal's staining method and was able to make the direct smear and culture agree only in 17% of the positive cases.

No other articles bearing directly on the direct smear were found in the literature of the last 15 years, but perusal of articles of a closely allied nature would lead one to believe that direct smear examinations are of little significance and therefore worthy of no serious consideration. It would appear that the general view of bacteriologists and the medical profession, as a whole, is expressed by Frost (2) in a paper by him on a rapid cultural method of diphtheria diagnosis, in which he states: "Smears made directly from the swab gives presumptive evidences immediately but have never been considered reliable by bacteriologists."

Further, one cannot help but be impressed by the indifference and even antagonism exhibited by some members of the medical profession in regard to usefulness of the laboratory in the diagnosis of diphtheria and other acute throat infections. One can understand why a physician at some point distant from a laboratory might not avail himself of the opportunities afforded by a laboratory, but when a group of physicians

in a large hospital with all laboratory facilities at hand will not take advantage of their opportunities there must be something radically wrong with out method of analysis in these acute conditions.

In an article entitled "The Menace of the Diagnostic Throat Culture in Diphtheria" Bullowa (3) and others of the Willard Parker Hospital New York, express their attitude thus: "In the interest of clear medical thinking we wish to express the fallacies that may result from the throat culture diagnosis of diphtheria and the dangers consequent upon delay in making the diagnosis from a laboratory report instead of from the clinical picture." In his conclusion he says: "When in doubt as to the correct interpretation of symptoms it is better to give antitoxin needlessly than to err by waiting for a laboratory report," and further, "The report from the laboratory adds nothing decisive towards the diagnosis." It is true in treating a case of acute sore throat the physician without question must use his own judgment and often will act immediately in the interests of his patient without considering the facilities of the laboratory but, on the other hand, there is no excuse for one taking such an antagonistic view as Bullowa does towards the services rendered in a properly equipped and staffed Public Health Laboratory. It is quite clear that dissatisfaction in this particular branch of laboratory work results from (1) the delay in reporting necessitated by cultural methods, (2) negative reports in definite cases of diphtheria.

Two or three years ago we were lead to give some time and consideration to the study of direct smears as a result of a demand on the part of some physicians for early reports on throat swabs. On beginning this investigation it was necessary at the outset to adopt some staining method that would clearly depict metachromatic granules which are of so much significance and of such vital importance in the recognition of the diphtheria bacillus. Methylene blue, which is an exceptionally valuable stain for demonstrating these granules in cultures of diphtheria bacilli practically loses its staining quality in direct smears. Several different stains have been introduced from time to time in an effort to make these granules appear more distinct. One of the earliest of stains for this purpose was introduced in 1897 by Neisser. By using an acid solution of methylene blue with an aqueous solution of Bismarck brown as a counterstain he succeeded in staining the germ bodies brown and the granules blue. Greenthal described a stain using Kresylecht violet and methylene blue in acid solution, by which method the granules take a distinct violet and the balance of the cell a pale blue colour. From the standpoint of simplicity Greenthal's method has a distinct advantage over Neisser's stain. Another stain of considerable importance was described by Ponder in which Toluidin Blue was used in slightly acidified aqueous solution. In stained smears of diphtheria bacilli the

granules are definitely metachromatic, appearing reddish purple in contrast to the pale blue colour of the balance of the cell. In 1915 Kinyoun (4) introduced a modification of Ponder's method, adding to the ingredients already present a small amount of methylene blue and azur II.

After some preliminary study it was quite clear that Kinyoun's method was ideal for staining direct smears. This stain is very readily prepared and does not deteriorate even after standing in the laboratory for long periods of time. The staining procedure is extremely simple. The fixed smear is covered with the stain (cold) and permitted to remain in contact with it for three minutes. The smear is then thoroughly washed in running tap water and blotted. In such stained smears diphtheria bacilli stand out very prominently, the granules becoming intensely metachromatic. Other bacteria, pus, fibrin and desquamated epithelium are shown off to advantage also, appearing clear cut and taking up a pale blue stain.

Since many throat swabs come to Public Health Laboratories from distant points it is often 12 to 24 hours before they reach their destination. Such swabs are usually dried out and we were rather dubious as to the possibility of securing satisfactory preparations. But no such difficulty has been experienced in making smears when the swabs were taken from throats with considerable tonsillar and pharyngeal exudate. On the other hand, when little exudate or membrane is present in the throat it is next to impossible to secure a satisfactory smear from the dry swab. By momentarily dipping the swab, however, in a small amount of sterile distilled water or broth usually enough exudate can be expressed to give some information as to the nature of the sore throat. The water of condensation on a tube of Loeffler's serum serves admirably for moistening the swab.

#### METHOD OF PROCEDURE

Our routine is as follows:—All dried swabs are moistened and allowed to stand for 30 seconds and the smear then prepared. As most swabs contain little exudate, an important point is to make a small concentrated smear. By the "dabbing" method a smear not larger than the diameter of a Canadian five cent piece is prepared on a sterile slide. Each slide will hold three or four properly prepared smears. After fixation with heat the smear is stained as above described and after thorough washing and blotting is ready for examination. After the smear has been prepared the swab is thoroughly rubbed over the surface of a tube of Loeffler's blood serum, which is then incubated at body temperature for 18 hours. Our purpose was primarily to examine the smears for the diphtheria bacillus, but it was not long before we felt that in the absence

of this organism, an opinion, in many instances corroborated by subsequent culture examination, might be given in other throat affections, particularly *Streptococcus* and Vincent infections.

All swabs submitted during the course of this examination have been examined by both direct smear and culture except in a few instances where some municipality, in an attempt to round up a diphtheria carrier, submitted a large number of swabs from apparently healthy throats. The swabs for examination have come not only from physicians in the City of London but from physicians throughout all parts of Western Ontario.

In our series 4029 comparative smear and culture examinations have been made.

The main object in our examinations was the demonstration of the diphtheria bacillus. Swabs submitted were either for (a) Diagnosis—that is from an acute throat with no previous positive report—or—(b) Release—a swab from a case ready for release from quarantine. Of the 4029 examinations 722 were positive for diphtheria. These positives were made up as follows:

Direct smears and cultures both positive.....	272 or 37.7%
Direct smears alone positive.....	127 or 17.6%
Cultures alone positive.....	323 or 44.7%

From these records we deduce that we have been able to make a positive diagnosis by direct smear in 55.3% of all bacteriologically positive cases and further we wish to emphasize that 127 cases, or 17.6% of all of the positive, would not have been recognized bacteriologically as diphtheria had not a direct smear been examined.

These figures include all positives whether for diagnosis or release. If we consider only swabs from cases for release our records show that 793 release examinations by direct smear and culture were made. Of these 149 were positive; these were made up as follows:

Direct smears and cultures both positive.....	24 or 16.1%
Direct smears alone positive.....	10 or 6.7%
Cultures alone positive.....	115 or 77.2%

From these results it would appear that the direct smear is much less satisfactory in release cases than in cases for diagnosis. The direct smear should not be abandoned, however, in cases for release because a small percentage of cases will give a positive result in direct smears only. As just mentioned, we have found that 6.7% of all positive release cases were diagnosed by direct smear only.

It was not our intention at the outset to study the smears from the standpoint of acute infections other than diphtheria nor have we kept an accurate record of our observations in these cases. Exudates,

however, stained with Kinyoun's method appear so clear that much information can be derived from the direct smear examination and frequently very striking pictures are obtained in Streptococcic throats and in cases of Vincent's angina. In our experience, in diphtheria pus is so seldom found in direct smears that we have come to consider it as indication of a pyogenic infection and often in such smears the presence of large numbers of diplococci of the spheroidal type or short chains of the same organism give us a pretty picture of an acute Streptococcus infection. Organisms of the proper types and in sufficient numbers in 22 cases were found to warrant a diagnosis of Vincent's angina.

#### DISCUSSION

Positive direct-smear diagnoses were made only after morphologically typical metachromatic bacilli were demonstrated. We have followed Wesbrook's classification and have made our diagnoses upon the demonstration of Types A, B, C or D. Any other forms, whether metachromatic or barred, are looked upon as having no diagnostic significance. Other organisms with metachromatic tendencies have to be distinguished. An organism of the Hay bacillus variety frequently exists as a saprophyte in the throat and its prominent polar granules will immediately attract attention. This organism, however, has its own distinctive morphological features and with a little experience offers no difficulty in differentiation. The diphtheria types most frequently encountered by us have been Wesbrook's D types, which are medium sized bacilli containing two metachromatic granules, one placed at each pole. A, B and C types also have been frequently found.

We have noticed in a large number of cases for diagnosis, where the direct smear and culture were both positive, that the direct smear showed a much more typical picture than the culture. In some instances this was due to a prolific growth in the culture of other organisms, largely overshadowing the diphtheria bacilli; in others to a less typical morphological appearance of the diphtheria bacillus in the cultures than in the smears.

As previously noted, 323 or 44.7% of all positive cases were positive only in culture. In explanation two facts appear to be responsible. In the first place our records show that direct smears from cases for release are comparatively unsatisfactory; and 115 of these 323 examinations were for release. The second factor responsible for so many poor results is that many of the swabs from outside points were submitted with very little exudate and it was impossible from them to obtain a satisfactory smear.

On the other hand, what is the explanation of so many direct smears being alone positive, while the culture was negative? One possible

explanation is that the diphtheria bacillus in certain cases die out on swabs that are submitted from some outside point, if they are not planted on Loeffler's serum for 24 to 36 hours. Bullowa and others have shown that from duplicate swabs taken from the throats of diphtheritics, one set being immediately planted on serum, the other being sent to a State laboratory, that 3% more positives were obtained from those swabs which were immediately planted, indicating that environmental conditions have a definite influence on subsequent growth. Further, we have noticed that other organisms, particularly *Staphylococcus aureus*, will produce such a heavy growth that undoubtedly the diphtheria bacillus has been inhibited and overshadowed by this growth.

Are we justified in making a diagnosis of diphtheria on the picture of the direct smear alone? The diphtheria bacillus has a distinctive morphology, and upon this we have to depend entirely when making a diagnosis of diphtheria. In our experience the morphology is usually so typical in direct smears that we do not hesitate to make a definite diagnosis. In the absence, however, of typical forms we cannot rule out diphtheria and must await the report of the cultures.

Since the completion of our records we have inquired into the clinical history submitted by the physician on the forms provided by the Provincial Board of Health. Since the personal equation is such an important factor in the interpretation of symptoms, we realize that too much stress cannot be brought to bear on histories, but of the 127 cases positive by direct smear and negative by culture we find 68 without any history at all. Of the remaining 59, 42 had clinical symptoms of diphtheria and 17 symptoms of tonsilitis or other acute throat infections. This seems to clearly show that the direct smear has been the means of detecting many cases of diphtheria.

#### CONCLUSION

As an aid in the diagnosis of acute throat infections the direct smear has been found of inestimable value and in diphtheria holds a place of equal importance with cultural methods.

It is most serviceable in the early diagnosis of diphtheria. In such cases it has not only made possible an immediate report in 55.3% of positive cases, but has been the means of increasing the number of positives by 17.6%.

In throat swabs for release from quarantine for diphtheria the direct smear is much less satisfactory. 77% of all positive cases for release were positive alone by culture. Still it would appear to be worth while in view of the fact that 6.7% of all positive release swabs were diagnosed positive on the direct smear only.

In acute throat affections other than diphtheria sufficient evidence of the nature of the infection is found in many instances, particularly in acute Streptococcic infections. In Vincent's Angina the direct smear is the only method of satisfactorily making a laboratory diagnosis.

In the combined direct smear and culture examination we have the best method at our command for obtaining the most rapid and most satisfactory information in acute throat affections, and in order to encourage the combined examination the Provincial Boards of Health should supply outfits to physicians so that both direct smears and swabs might be taken at the bedside. By inserting into the test tube along with the swabs a laboratory slide cut to suitable width, a simple and satisfactory outfit could readily be provided.

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## Keeping Well People Well

By A. GRANT FLEMING, M.B.

AS one reads the history of the earlier years of the English industrial era, there is left on the mind the imprint of a story of human misery which resulted from the rapid collection of large numbers of people into the newly-created manufacturing centres. It seems incredible that not more than a century ago people lived in such overcrowded filthy quarters, and that they and their children worked in what was practically a condition of slavery.

These years of affliction were followed by a period of reform. There was born in the land a spirit which demanded action in regard to the improvement of working and living conditions. Two main motives seem to have prompted this happy change in attitude, which made responsibilities towards one's fellow man a reality. These motives were humanitarian and economic. There is always a tendency to belittle the humanitarian side, and while not for one moment is it suggested that selfishness did not exist, it is only fair, as it is true, to point out that the humanitarian motive was then, as it is now, the most effective force on the side of reform. One does not feel that the pen of Charles Dickens was such an effective force for any other reason than that he desired to see abolished the conditions which to him appeared as being the cause of so much misery and suffering.

As part of this great forward movement, Public Health came into being. Edwin Chadwick and his associates led the effort to reduce sickness amongst the poor. Largely as a result of their work came the Public Health Act and General Board of Health in 1848.

Since that time, which is not so long ago, there has come to us a great deal of knowledge concerning the cause and mode of spread of certain diseases. Pasteur, the great Frenchman, through his work brought a new science, that of Bacteriology and Immunology, into existence, and laid the foundation for the larger part of Preventive Medicine, that newer aspect which, in its broadest sense, is dominating the whole field of medicine.

We cannot properly appreciate changes that take place in our own generation, because, for to-day's events, we lack perspective. However, we may view them as best we can. Sir George Newman expressed in words the comparatively recent change in the practice of medicine: "It is now generally acknowledged that the ultimate purpose of the

science and art of medicine is not to cure the individual patient only, but to seek out the laws or principles which govern health or ill-health for the human family."

To-day we stand with certain definite accomplishments in the field of prevention. The truth of the motto of the New York State Department of Health—"Public Health is purchasable"—has been repeatedly proven in many places. This is so true, and methods have been so standardized by past experiences, that certain results are practically guaranteed by the expenditure of certain sums of money by qualified workers in a given area.

We have seen Typhoid Fever practically vanish where water and milk supplies are properly safeguarded. We have seen summer diarrhoeas in infants practically eliminated as a cause of death following the education of mothers and the provision of a safe milk supply. Education and institutional care have brought Tuberculosis down from the first position as a cause of death to third or fourth. We have the means both to prevent and to cure Diphtheria. Smallpox is unknown in vaccinated areas. Typhus Fever, Plague, Malaria and Yellow Fever can all be controlled.

We might continue the list, but enough has been said to remind us that the past fifty years have seen an advance in the elimination of diseases that savours of the supernatural. Such progress will continue, for when the specific cause of a disease is found it makes possible an intelligent and successful fight against such a disease.

No one is ever quite satisfied with progress when the saving or losing of human lives depends upon the rate of that progress. We should, however, be humbly grateful that the past fifty years have seen the world freed from the grip of many diseases. Organized Public Health has had to develop rapidly in order that the people might receive the greatest benefit from the newer knowledge of disease prevention. There can be no let-down in any phase of the work in hand or there will be a slipping backward. The price of community health is the maintenance of an efficient health department with a reasonably adequate budget.

The dividends of Public Health are accounted in such statements as that of Sir Arthur Newsholme who, in one of his American addresses, states: "The expectation of life at birth in England and Wales in 1871-1880 for males was 41.4 years; for females, 41.9 years. It steadily improved decade by decade; based on the experience of 1910-1912, the male expectation of life has been prolonged by 10.1 years and the female by 10.8 years. Of the annual saving of 234,955 lives 64% was ascribed to reduced mortality from acute and chronic infectious diseases."

Dr. Charles J. Hastings, in the January, 1921, bulletin of the Toronto Health Department, asks the question: "Is the expenditure on Public

Health justified?" In answering this question, he states: "There were 1,900 fewer people died in Toronto in 1920 than would have died if the death rate of 1909 had continued."

The practical elimination of certain diseases and the great reduction in the occurrence of others have meant a great accomplishment in the effort to keep well people well, in the sense that they have been protected from certain definite diseases.

In later years the health education work has had a definite effect. In this field the Public Health Nurse is the all-important factor. She is a health teacher whether in the home, the school or the health centre. There has been an improvement in health practice as a result of this teaching and other educational work, and doubtless a corresponding improvement in health conditions.

There are times when we feel that we might mark time for a year or two in order to develop more fully the application of our present knowledge. This feeling comes when we realize that some communities still hesitate to spend the necessary money to save human lives, or when we think that Diphtheria, a preventable and curable disease, still accounts for many deaths. However, because some one person, or a small or large community, hesitates to spend money to prevent disease is no reason why others should falter in their advance towards the health goal. What is the health goal? Is it a condition of freedom from disease only? I think not. Health is not mere freedom from obvious disease. It is a condition of well-being that allows for the best physical, mental and spiritual attainments.

We are faced with the problem that there is a very large group of people who are not diseased but who are not well. Public Health to-day must meet this problem. Well people must be kept well in the sense of our definition of Health—a condition of well-being, not mere freedom from obvious disease.

I desire to give you a few facts in regard to the prevalence of minor illnesses, as distinct from obvious disease, in the population.

In Report No. 23 of the Ministry of Health on "The Incidence of Rheumatic Diseases", we read: "if we assume that our sample be a fair one of the general insured population, then we may estimate that more than 1/7 of the total sick benefit, of £1,800,000, is paid to, and 3,141,000 weeks of work lost annually by insured workers on account of 'rheumatic' diseases as studied and classified in this report."

The New York State Commission on Ventilation ascertained that in New York City a school child is absent from school one day every three weeks. Approximately half of the absence is due to illness.

Fitzgerald, in his "Practice of Preventive Medicine", states that "Frankel and Dublin concluded, as a result of sickness surveys conducted

in Rochester, N.Y., Trenton, N.J., and in North Carolina in 1916, that between two and three per cent. of the population investigated at ages 15 years and over are constantly sick, and in 80.4% the illness is serious enough to render them unable to work."

In the United States Public Health Reports of February 13th, 1925, there is an article on "The Incidence of Illness in a General Population Group Covering a Period of 28 Months." Three of the conclusions drawn are: "(1) Over 100 cases of illness occur annually for each death; . . . (4) The 'general diseases'—epidemic and non-epidemic—composed principally of those diseases against which public health effort has been mainly directed, caused only 11% of all illnesses; (5) While deaths occur principally in infancy and in old age, ill-health, as measured by the incidence of illness, occurs with comparatively little variation throughout life."

The physical unfitness revealed during the war gives us a clear picture of a large part of our population, who are not obviously diseased but who have not health and who are not having a fair chance. If we aim to make the world a better place in which to live, to make people happy and to increase efficiency and so promote good citizenship, then much remains to be done. People who are not well cannot be efficient in their work, and certainly their "ability to achieve and capacity to enjoy life" are, to say the least, diminished.

The individual who has not health is truly to be pitied. There is also a serious national side because such a group of individuals means a lowering of national efficiency. The cost of living is of national interest. Into the cost of any article goes the employee's wages. If the employee is not fit can he produce a full day's work? It is evident that illness, lack of physical fitness, lack of health amongst a group of workers is a national expense. In England and Wales, during 1923, amongst the insured population only there was lost, due to sickness, the equivalent of the work of 394,230 persons, and this does not include the loss due to sickness for which no benefit was paid.

That this condition is receiving consideration is shown by the following from "On the State of the Public Health", Ministry of Health Annual Report for 1923: "It is common knowledge that, in addition to deaths and the occurrence of notifiable infectious diseases (which, excluding Tuberculosis, are responsible for perhaps 10% of the mortality), there is a wide prevalence of ill-health in the community due to general sickness, invalidity and physical impairment, which in bulk provides the chief burden of disease and disablement. It is true that much of it is directly or indirectly infective in origin, though it is not included in the records of infectious diseases. Here, then, is a great burden of disease which incapacitates and cripples to a serious extent and yet finds no

place in notification or death returns. It is largely unmeasured and unregistered, and yet it is the principal cause of physical inefficiency. Much of it lays the foundation of mortal disease, and much of it is preventable; and all of it constitutes a part, perhaps the main part of the health problem of the nation."

The very natural question arises—what is the cause of so much ill-health? Such a question is reasonable for unless there is a partial answer to it we might as well stop at this point. If, however, we have even a partial answer, then we may suggest some plan to attack this dragon of ill-health.

We do know that focal infection is responsible for a great deal of physical impairment, because from these foci, where there is a collection of germs, the poisons they elaborate and sometimes the germs themselves pass out into the blood stream and so are apt to reach and damage various parts of the body. In the report previously referred to, which covered a study of Rheumatism, it is stated: "In acute and subacute rheumatism, tonsillar sepsis may be an important etiological factor. Of patients with acute rheumatism, nearly 50% had enlarged or septic tonsils; only 2% of patients with acute rheumatism had had their tonsils removed."

In comparing two diagrams showing morbidity and mortality, Sir James MacKenzie remarks: "Thus in the first diagram 25% of the cases suffered from some trouble of the digestive system, while in the second diagram only a little over 6% died of diseases of this system. The suggestion arises that diseases of the digestive system, by weakening the body, predispose to other diseases."

This is apparently the keynote. From our knowledge it is the personal hygiene or the regulation of the individual's life to his own physical equipment that decides whether or not he is to be free from these minor illnesses. It is the proper adjustment of hours of rest, recreation, securing of fresh air and proper diet following the correction of physical defects, of which the outstanding is apparently the removal of focal infections.

Our reason for stating this is that wherever a group of individuals have accepted advice as to the correction of their physical defects and followed the routine of life set out for them, there has occurred, in a large percentage of cases, a marked improvement in health.

How, then, are the general public to secure the benefits of community and personal hygiene, which will do away with preventable diseases and maintain health, or, in other words, Keep Well People Well?

As Canadians we are alive to the need of a sturdy, healthy population. We must consider health in a national way, and devise means for seeing that all Canadians have the benefit of the scientific knowledge which, if

properly applied, would add years to the average life and, more important still, make all the years of life years of health and efficiency.

At present, in some centres, where they have a health department with a well-trained and properly directed staff and a reasonably adequate budget, there is given to the community protection against such diseases as might be spread by a contaminated water supply, by impure milk and other foods. There are offered facilities for securing protection against smallpox and diphtheria. Facilities are furnished for prompt public health laboratory diagnosis and for the provision of biological products for preventive and curative work in communicable diseases. There is also the protection from communicable diseases that proper quarantine and isolation hospital facilities afford. The general standard of health is improved by proper housing, prevention of over-crowding, and by a general sanitary environment. Special clinics for the diagnosis and treatment of Venereal Diseases are provided. In addition, there is the health education work concerning personal hygiene conducted in the home, the school and the Health Centre.

A definite beginning has been made to provide routine health examinations and supervision for certain age groups. First, there was the school child, provided for by the school health service. Then followed the Well Baby clinics, later enlarged and supplemented by ante-natal and pre-school clinics. Lately, in a few centres, a routine health examination is offered to adults.

Everyone who knows anything of the results, obtained through the activities of these various types of health centres, appreciates their value. In co-operation with, and as the centres from which home-visiting is done, they have given results which are proven by the rapid lessening of preventable illness and deaths. School health services do not show much statistical results in the present, but if we are right in our belief concerning the physical harm done by diseased tonsils, adenoids, teeth and other defects, the next generation of adults is going to have better health and fewer diseased bodies, thanks to this one activity of the school health service in securing the correction of physical defects. Unfortunately, these advantages exist only in organized communities, and indeed only in some of them.

To keep the well people well in our country depends then, first of all, upon the spread of community hygiene all over the country. It also means the practical application, by every individual, of personal hygiene. This means that the whole population must be instructed and directed in the practice of personal hygiene. I do not intend to elaborate further as to how community health programmes might be extended to cover the country, but shall confine myself to the consideration of the furtherance of personal hygiene.

To a certain extent, and, in a few places, to quite a considerable extent, instruction in personal hygiene is given in health centres, in schools, and to various other groups. This work should be continued and extended. The school is the educational centre. It seems reasonable that it should provide a thorough education in personal hygiene. To the objection that the school curriculum is already overcrowded, I would reply that first things must come first, and that there is nothing more essential for the individual and the nation than that our young Canadians be properly instructed in personal hygiene. If it is necessary to eliminate something from the curriculum, let it be done, but in any case sufficient time should be given to the effective teaching of personal hygiene.

Group instruction for all ages, in different groups and on various subjects, should be available in both large and small communities. Individual teaching has its place and so has group teaching. The group in itself is a stimulus; there is also a continuity of teaching and freedom from interruption.

With the best of general instruction there remain the special problems and needs of each individual. Of paramount importance is the earliest possible recognition of any deviation from the physical normal. The greatest criticism of the present system of the practice of medicine is that it is left for the individual to decide when to call his physician. As a result we frequently hear the expression "sick enough to have the doctor." The system is wrong. We will always have sickness, and the doctor will always have sick people to care for, but he should be regularly consulted to prevent sickness.

It is a fact that cases of Tuberculosis still most frequently come to their physicians when the disease is well advanced, and that cancer cases are first seen when it is too late for treatment. People still go about with mouths that have many foci of infection in them. It is also true that many are not properly treated for minor ailments.

It does seem that if every person were to receive a proper medical examination once a year, the earliest symptoms of disease would be detected, which would permit of proper and effective treatment with an optimum chance of a cure. Also, and of equal if not of more importance, the opportunity would be given for individual instruction as to personal hygiene. We must keep in mind that knowledge and practice are two very different things. The general spread of health knowledge has resulted in health practice in only a percentage of the population that it has reached. Possible the chief reason for this is carelessness, plus the feeling that it is not personal. As long as people feel well, they are apt to disregard advice for the maintenance of that condition of health in the future. Carelessness and lack of feeling that advice is personal

would be largely overcome by the personal examination and the personal advice of the family physician. Such personal service is necessary also because while general rules of health can be taught there are personal needs and differences which only personal service can meet. It should be understood that the earliest detection of a deviation from the normal requires more skill than does the diagnosis of an established disease. Such an examination, therefore, demands the time, care and skill of the examining physician.

If we believe that the maintenance of the health of the people is a responsibility of the state, does it not follow that the state is responsible for seeing that every person has the opportunity of securing a proper yearly medical examination, which will reveal the earliest signs of disease, and that each one, at the same time, receive instruction in personal hygiene.

I am not presenting a definite plan for accomplishing this but simply certain ideas for consideration with the hope that they may provide material for discussion.

Following the war the Dominion Government, through its then newly-organized health department, decided to take leadership and to expend money in a national effort to fight venereal diseases. This work has been successful, so successful indeed that it should encourage the authorities in a further development of such leadership and justify the additional expenditure of money on other health lines.

I would suggest that the Federal Government supply all physicians with standard forms, suitable for recording such routine physical examinations, special forms to be provided for ante-natal, infant and other groups. I understand the Canadian Council on Child Welfare has done something along this line in providing forms for recording the examination of children.

Keeping in mind that the value of any medical examination depends upon the thoroughness with which it is done, and that a careless one is worse than none at all, I would further suggest that a copy of the results of examination, on the form provided, together with a statement as to the advice given, be furnished to some central office. Upon receipt of such a report, the physician would receive his fee from the state.

Such a suggestion will, I know, bring forth many objections. But, if we accept in principle that every person should have a yearly medical examination, how else can it be brought to cover the whole country other than through the family physician? In organized communities there might be special centres, just as there are now centres in some places for ante-natal and child welfare work, or those which the school service provides for children of school age. Even then, I believe that freedom of choice in physician would be valuable. The general practitioner must

be used more and more in preventive medicine. No one can fill his place, but it must be appreciated that in his doing of the work he is not to be exploited as he has been in the curative field. If the state desires the examination of those who cannot reasonably afford to pay for such an examination, then the state must be prepared to meet the payment of such fees as are just. In return, the state has a perfect right to see that its money is properly expended, in fact, that is its duty, as well as to be sure that the individual received a proper examination and advice.

There is one thing about which I do feel very certain and that is that unless some central authority will undertake this work, there are going to be large gaps, and large sections of the population will remain uncared for. If the human capital of the country is at stake may we not ask for Dominion leadership? Such leadership will not destroy local pride or initiative but will stimulate it to carry on and find the outlet for itself in adapting general plans to local needs, such, for instance, as providing special mental examinations when their need is indicated.

There is one further point that I would mention. Health workers and others who are interested in keeping well people well must realize that even with knowledge and the best of intentions concerning personal hygiene, the ability to perform is often dependent upon home conditions. What hope is there to fight Tuberculosis, which is largely a problem of nutrition, if the family income is inadequate?

I merely mention this because I desire to close with this idea, that if well people are to be kept well and if personal hygiene is to be practised by the masses, there must be more understanding and a more united effort on the part of the workers in preventive medicine and social service.

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# Physical Examination in Pulmonary Tuberculosis

## With a Few Remarks on Tuberculous Adenitis

By G. C. BRINK, M.B.

**A** WELL taken history is only a matter of a little patience and time, and is always available. The determination of the presence of contact is always of value. To obtain this information with a certainty one must not only enquire about the health or cause of death of parents, brothers, sisters, wife, husband, children and grandparents, but also of anyone living or who has lived in the same house with the patient.

The previous health of the patient affords valuable information. Make note if at any time in life a persistent cough, sputum (blood stained or not), persistent hoarseness, chest pains, loss of weight or strength have been present. Also if the patient has ever had pleurisy, pneumonia, influenza, ischio rectal abscess, cervical adenitis, tonsillitis, measles or pertussis. Pleurisy with effusion is in the vast majority of cases of tuberculous etiology.

The history of the present illness follows: Fever in the afternoon and evening without explainable cause is one of the most important signs. Cough, expectoration, acute pain in the chest, usually at the bases, malaise, loss of weight and night sweats are perhaps the cardinal symptoms. Hemorrhage or definite blood spitting should always be considered as being intrapulmonary in origin until proven otherwise.

We now come to the physical examination, and it would appear wise to describe that of an adult and that of a child separately.

Many hopeful cases have become hopeless because the patient was not asked to remove his shirt. Women may be covered with a towel or shawl and the examination carried on without embarrassment to them or inconvenience to the physician.

There is no single diagnostic sign of pulmonary tuberculosis; each and every part of an examination has its own significance and proper value.

Physical examination for signs of tuberculosis consists of four chief methods, namely,—Inspection, Palpation, Percussion and Auscultation.

### THE ADULT.

*Inspection*—This should first take in the general development and nutrition. Before devoting special attention to the chest it is important to note possible disease of the teeth and tonsils, if the patient

is a mouth breather, and any abnormality of the thyroid gland. Inspection of the hands often gives valuable information. Clubbing of the fingers, although sometimes found with tuberculosis, when extreme, is usually associated with non-tuberculous conditions—chronic empyema, bronchiectasis or heart disease.

Taking up the chest proper, it is usually best first to note when visible the position and character of the heart's apical impulse. If displaced there are three possible causes—disease of the heart, lungs or pleura. Next comes the shape of the thorax—the patient, whether standing or sitting, should be in a position that gives the maximum muscular relaxation. A comparison should be made of the level of the shoulders, the clavicular fossae, the expansion of the two sides and any lessening or lagging of movement noted. Early signs of disease are drooping of the shoulder and slightly less and lagging movement on the affected side. An easy and quick method is to have the patient seated. One can then stand behind the patient and view the front of the thorax from over the shoulders. To view and compare the movements at the base of the thorax it is necessary to move to the front of the patient.

It should be remembered that in right-handed people the right shoulder is usually slightly lower than the left, and the right pectoral and trapezius muscles show greater development.

Slight curvature of the spine (postural or organic) will also bring about a lowering of one shoulder and apparent asymmetry of the thorax.

*Palpation*—Tactile fremitus is of little value in incipient tuberculosis. Light touch palpation will sometimes reveal an increased tension or rigidity of the upper border of the trapezius muscle and upper area of the pectoralis major on the affected side. In the early or the moderately early stages of disease palpation is not apt to reveal abnormalities except at the apices.

Before discussing *Percussion* or *Auscultation* an appreciation of the anatomic dissimilarities of the two sides which bring about the differences in resonance and breath sounds over corresponding areas of the thorax is of extreme value:—

(a) *The Apices*—The right apex is smaller, more conical and less dome shaped than the left. Its more conical shape is due to (1) the encroachment of the right innominate vein; (2) the right subclavian artery is more anterior than the corresponding left; (3) the superior vena cava lies in front of its inner part; (4) the trachea in its course deviates to the right and lies in immediate contact to its inner surface.

The above factors bring about a higher pitched or less resonant note on percussion to the 2nd rib and 4th dorsal spine on the right side than

on the left. For the same reason the breath sounds are higher pitched, with more prolongation of expiration at the right than left apex. In other words, bronchovesicular breathing at the right apex is normal.

(b) The descending bronchus and its posterior branches in the left lung lie closer to the posterior wall of the thorax, just internal, and below the angle of the scapula than the corresponding bronchi of the right. For this reason the breath sounds at and around the angle of the left scapula are frequently normally bronchovesicular.

The note is always less resonant at the apices than at the bases, due to the fact that there is less lung tissue in the tops of the lungs than at the bases, and that the distance the lung is from the surface percussed is greater at the apices (above the 1st rib) than at the bases.

*Percussion*—There are several methods of percussing, but the old method of comparing the resonance of corresponding areas, not forgetting the normal differences, seems the simplest and easiest.

Moderately light percussion seems to be best suited for bringing out changes in lung resonance. It is easier to percuss from the area of low to the area of higher pitched resonance. Percussion should be the same as to the force of the blow and the firmness with which the pleximeter finger is applied. The person who percusses should be as nearly as possible in front or behind the person percussed.

Mapping out of the lung borders at the apex—(Kronig's isthmus)—has its value. Either fibrosis or lessened function tend to decrease the width of the area of resonance.

Outlining the position and excursion of the diaphragm is done from behind, but unless one is in constant practice accurate determination is difficult.

*Auscultation*—Auscultation is the most important means at our disposal for the detection of intra thoracic disease. Some writers may give the foremost place to the X-ray findings. However, a stethoscope is easier to carry around and much less expensive than an X-ray unit. The stethoscope should be applied as nearly as possible at right angles to the chest wall and held in position firmly. After familiarizing oneself with the normal variations of the breath sounds of the two sides the attention should be directed first to the character of the inspiration and that of the expiration, which is normally  $1/6$  as long as inspiration. Expiration is frequently normally inaudible.

We now come to the most invaluable procedure of the whole physical examination—that is, the detection of the presence or not of rales. There is only one recognized method of eliciting rales, and unless it is employed seventy-five per cent. of the early, and many of the moderately advanced cases of pulmonary tuberculosis without definite signs and symptoms will

be missed. The method is to have the patient breathing deeply and slowly (12 respirations to the minute) through the mouth, and at the extreme end of expiration have him give a short cough, followed immediately by a deep inspiration. If rales are present they are heard usually in the first part of inspiration. One explanation is that in the act of coughing the glottis is closed and the intra thoracic pressure is raised to many times the normal, thereby bringing about separation of the walls of the alveoli and those of the smaller bronchioles with the production of medium coarse moist rales so typical of tuberculous disease.

Dr. Bray of Saranac took 400 cases in which rales could be heard on inspiration following the expiratory cough. In only 100 of these cases were rales heard without cough, proving conclusively that the above described method is our most valuable asset in the eliciting of rales in cases in which they are not heard on ordinary respiration.

A good rule to follow is—rales heard above the 3rd rib and the 5th dorsal spine, either side, must be taken as being tuberculous in etiology until proven non-tuberculous. Rales heard in the lower half of either lung should be taken as being of non-tuberculous origin until proven tuberculous. (The latter, of course, refers only to those cases in which there is no demonstrable lesion in the upper half of the lung. It is rare that the primary focus of disease is found in the lower half of either lung.)

#### EXAMINATION OF CHILDREN

The information that should be sought in the history of the child is as essential as that of the adult. Contact is especially important, and the information as to whether the child has been raised on mother's or cow's milk is of value. If on the latter, one should not forget, if pasteurization has not been carried out, the possibility of infection from bovine origin. Cough may occur from tuberculosis in infancy or childhood, but it is not a frequent symptom. In those of 2 years and over the usual first indication of illness is the lack of desire on the part of the child to play. Loss of or stationary weight without apparent cause is suspicious. The fact that the child has had or has not had measles or whooping cough is important, as these two diseases may produce, in a child, the same physical signs in the chest and the same type of shadows in the X-ray film as tuberculous disease.

Physical examination is frequently unsatisfactory and the abnormal signs noted difficult of interpretation. We must clearly appreciate the fact that apart from miliary tuberculosis the disease is limited to lymphatic involvement and best demonstrated in the presence of enlarged tracheo-bronchial glands in the hili. Percussion changes are usually

limited to the areas of mediastinal dullness. The Eustace Smith murmur, which is a to and fro murmur heard close to the sternum on the right side and associated with enlarged glands at the hili, is thought to be produced by the pressure of the enlarged mediastinal glands on the innominate vein. To illicit this sign have the head in position of extreme extension. The frequency of venous hums at the root of the neck render the finding of doubtful value. More emphasis is laid on the D'Espine sign, which consists of a prolongation of the whispered voice over the upper dorsal vertebra. The hearing of the whispered voice is normal to the 4th dorsal spine. Some believe that any increase in the whispered voice transmission, either in loudness or area, is only produced by enlarged tracheo-bronchial nodes, while others claim that it is heard in the absence of such enlargement.

Tracheo-bronchial gland enlargement is not necessarily of tuberculous etiology. It can be brought about by non-tuberculous conditions, such as measles, pertussis, pneumonia, frequent chest colds and mouth breathing. The presence of rales in a child's chest, unless the condition is miliary or advanced, almost excludes the possibility of tuberculous disease.

A positive tuberculin reaction only indicates infection with the tubercle bacillus.

A slight rise in temperature is of little significance. It has been found that a large percentage of apparently normal children run a temperature as high as 99.4.

The general developmental and nutritional conditions of the child are, after all, the most important findings. Even if the child has been a contact and has been proved infected, one must eliminate all other possible foci of infection, such as diseased teeth, tonsils, adenoids and pyelitis, and give account to the care and mode of life of the child before tuberculosis may be considered the factor.

#### TUBERCULOUS CERVICAL ADENITIS

The anterior cervical glands lie just under and in front of the sternomastoid muscle. They receive their afferents from the tonsil, the base of the tongue, the submaxillary and submental nodes. The posterior cervical glands lie just under the posterior border and behind the sternomastoid. They receive their afferents from the sub-occipital and mastoid region, also from the mucosa of the naso pharynx, the sinuses and the retropharyngeal glands. The anterior group is the more commonly involved in tuberculous infection. It is very rare to find the posterior group involved.

*Clinical signs*—There is nothing distinctive on palpation of enlarged tuberculous cervical glands. Occasionally if a large group is involved they are matted. The process is usually painless and of slow onset.

*Differential diagnosis*—Because of the anatomical arrangement of these lymphatics other possible causes or sources of infection must be considered. One must first eliminate diseased tonsils and teeth. No history of contact with tuberculosis and the result of a negative tuberculin test are of value in excluding a tuberculous condition.

*Treatment*—(1) Constitutional treatment (this includes exposure to sunlight, the quartz mercury or carbon lamp) is the first consideration.

(2) Tonsillectomy if there is any suspicion of disease in the tonsils.

(3) If the glands are firm—leave alone.

(4) If there are signs of caseation (softening) or fluctuation present, attempt aspiration. If the aspiration is successful repeat if necessary.

(5) Consider adenectomy only when the above mentioned methods of treatment have been tried and failed.

If the glands are enlarged to the extent that they are unsightly, there must be, as well, considerable toxic absorption, then surgical removal, along with medical treatment, is justifiable.

X-ray and tuberculin treatment are undoubtedly of value, but should only be attempted by one skilled in their uses.

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## The Education of Your Sanitary Inspector

MR. A. R. WHITE

*Chief Sanitary Inspector, Provincial Dept. of Health*

MUCH has been accomplished during the last decade in providing trained personnel for public health service, and we find most of the great universities to-day have arranged special courses of instruction for physicians desiring to enter upon public health work.

We find courses of instruction also made available for nurses who desire to specialize in public health activities, and believe such supplementary teaching has, in a large measure, been responsible for much of the new thought and increased activity so evident to-day.

The providing of further education on public health subjects for physicians and nurses, while commendable, does not make provision or embrace the whole public health unit. Your sanitary inspector is still without basic public health training, and as a consequence, fully one half of the acknowledged personnel of Ontario's Public Health Service is in a somewhat similar position to the soldier who has been given a gun but has not been taught how to use it. He tries as best he can to understand the weapon, and even succeeds in putting it to some use. The same rifle in the hands of a trained marksman may and will probably achieve perfection. And thus we have the untrained sanitary inspector to-day doing the best he can, but oftentimes placing great stress upon non-essentials, and from lack of training helping to mould public opinion very often in the wrong direction.

As one who has had an unusual opportunity to visit all sections of Ontario and to meet with a great many sanitary officers of this and other provinces, I feel that this official is not now in a position where he is able to discharge the responsibilities of his office either with credit to himself, to his board of health, or to the public who pay his salary, *because of lack of training*. It is not so much the quantity of work performed but rather the quality that seems at fault.

The situation in Ontario seems to demand that the sanitary inspector shall have a working knowledge of all public health questions. This is doubly necessary in towns where his executive chief, the medical officer of health, is a part-time official, and is engaged for the most part in practising his profession. In situations of this kind (and such are and will be the more numerous until the present system is changed) the

sanitary officer is the official who meets the public, settles most of their difficulties, and in general is looked to for leadership upon such questions as may come up for decision from time to time. He is the man called in to decide points which require skill and special knowledge if he is to thoroughly explain why he takes certain action and in order that the educational value of how his decisions are reached be not lost to the public.

It is my opinion that the best public health to practise is that which is educational. You may go on from year to year with a large staff of officials searching for and finding nuisances, providing for their adjustment, and be kept extremely busy, but unless provision is made to teach the public the common dangers which are continually arising, so that they also may help boards of health which are in danger of becoming nothing more or less than bureaux where citizens' complaints may be investigated and adjusted.

In a paper read before the Royal Sanitary Institute of London, England, April 30th, 1924, Dr. Charles Porter, Medical Officer of Health, St. Marylebone, stated that after visiting a number of States in America and studying the health systems in use there, he saw nothing that even resembled the Royal Sanitary Institute, nor could he find any provision made for the purpose of educating the sanitary officer. He had been told, however, that a course of some kind might possibly be arranged by the University of Virginia. He further stated that as far as he could see, the sanitary officer in America had no legal qualifications, and applicants are chosen on personal, rather than professional grounds, the officer picking up what little he knows of the work from technical assistants of the Federal Health Service, and from such officers of the State Health Department as he may come in contact with.

The present method of choosing most sanitary officers to-day is made difficult because of the lack of a standard of competency in lieu of which municipal councils seem to choose the man who has the greatest influence with those making the appointment. Consequently, one not infrequently finds that a blacksmith, a butcher, or cement worker has landed the position. In cases of this kind, how can the public be expected to rest with confidence on the public health decisions of such an official thrown into a position requiring knowledge, judgment and tact, and having as the issue at times the question of huge expenditures of money, and perhaps even life and death. I am afraid law enforcement is the big issue in the minds of most inspectors of to-day, and the continuous flaunting of this sometimes necessary authority is the result of lack of knowledge and want of a better argument.

It is a well-known fact that to succeed in health work one must be a

teacher (a propagandist if you like) even in a humble way, but he who is expected to teach must first be taught the knowledge he is to impart, and his story should be so interesting and convincing that it shall carry conviction.

In the foregoing I have tried to show that there is in Ontario to-day many more full-time sanitary inspectors than medical officers, with the proportion increasing in favour of the first mentioned official, and that in such cases the burden of at least carrying out such plans and schemes as are formulated by this part-time chief, in addition to the regular routine, falls upon this official.

One might perhaps argue the inspector is really the Deputy Medical Officer of Health. If this is correct, and I feel that it is, should we not as a duty to the country, instruct, educate and fit him to carry out the grave responsibilities of such a position, and make him an ideal understudy, capable of discussing real public health issues and offering worthwhile advice. But how is the lay worker to be educated? There are no means provided to-day as there are in some other countries, notably England and Scotland. There are no Royal Sanitary Institutions as *Glasgow Technical Colleges* in Ontario or Canada, or even in the United States, according to Dr. Charles Porter. There are no schools where hygiene is taught that might be attended by those already engaged in health work, or by those who desire to study and fit themselves for the public service. There are, it is true, many books that could be purchased on sanitation, which, if studied, might be helpful. Unfortunately, many of these are much too difficult for the average layman unless he is fortunate in having had an opportunity to first lay down a foundation to get the proper meaning from his reading. The part-time medical officer, of course, does his best and gives whatever time he can spare to his inspectors' education, but even he feels the need of further study which is limited according to the demands of his practice.

In England and Scotland the situation which we have discussed seems to have been realized as early as 1876, for we find in that year the establishment of what is known to-day as the *Royal Sanitary Institute*, where students may attend lectures on sanitary subjects, and at the conclusion of such instruction may sit for examination, and if successful receive a certificate, which appears to be accepted by the courts and by the public as conclusive proof that the bearer is qualified to carry out and administer the important duties of his office.

There are many such qualified inspectors who have been trained in Great Britain, scattered throughout Canada to-day, and in most parts of the British Empire, but so far I have been able to locate only two such officials in the Province of Ontario.

The Royal Sanitary Institute of England has appointed and set up an examining body in the Western provinces, notably in Manitoba, and those who are aware of this fact might argue that a similar body might be provided for Ontario, and thus the situation which we have been discussing might be relieved and perhaps solved. I do not think, however, that such an arrangement would materially alter the present situation. Examination alone, without provision for teaching, cannot possibly take care of Ontario's future development, and to continue our present policy of giving positions to those who have the greatest influence is financially unsound, dangerous and a serious detriment to public health development.

Suppose the country health scheme were inaugurated and health units provided for the forty counties which comprise what is known as Old Ontario, such a plan would, of course, require the services of at least one hundred and sixty full-time inspectors to replace the host of part-time officers now in the service, and as such a scheme is designed to create greater efficiency, it, of necessity, must follow that the unit would not be complete or efficient with the trained medical executive, the staff of trained nurses and the *untrained sanitary inspector*. Complete success or even great improvement over the present system will depend upon the functioning of the entire unit, and the success of this new machine will depend upon the ability of the lieutenants who carry out instructions rather upon the chief who directs.

It seems to me that the proper solution to this problem is the establishment of a school where hygiene, or more particularly that phase of public health endeavour best suited to the needs of the lay worker, may be taught. Such a school might be attached and operated in connection with some of our institutions of learning here in Toronto. I mention Toronto particularly, as this is the seat of Government, the headquarters of the Department of Health, and an acknowledged centre of education.

The securing of teachers necessary for such a school should be made easy, as the resources of both government and city organizations would be available.

The course of instruction need not be of great length. In England students are required to spend three months with some recognized health officer, aside from attending the lectures of the Institute. Practical work is obtained by visiting with a qualified inspector already employed.

I am of the opinion that this is a proper and fitting time to discuss and take some action with respect to this situation. There can be few people more interested in the equipment of the sanitary inspector than his medical officer of health. I am further convinced that by providing a proper means whereby the sanitary inspector shall be educated upon public health subjects, you will have doubled the forces available for a

war against disease. You will attract to the work men of a much higher type, who will bring to the work ambition and enthusiasm which cannot but prove a benefit and a blessing to the country.

In conclusion let me point out that Ontario to-day, with some 3,000,000 people, may be Ontario of to-morrow with just double this population, in which case twice the number of inspectors would be required, and if drawn from the same sources as are those of to-day, would still be untrained.

## Radio Talks

Prepared for the Canadian Social Hygiene Council and delivered at CKCL  
Broadcasting Studio, Toronto.

### Unnecessary Disease and Death

Hon. Mr. Justice Riddell, President, Canadian Social Hygiene Council.

CANADA is a comparatively new country, but it aims at being a great nation, a prominent member of the magnificent British group of nations forming the British Empire, on which the sun never sets and over which the sun is ever rising.

Canada is destined to be the home of millions of happy and contented people. And that can best and most quickly be brought about by careful attention to her resources of all kinds. The timber wealth of our forests is exceedingly important; so are the mineral wealth, the splendid wheat land and pastures, the rivers and lakes teeming with fish.

But when all is said, all these must be held secondary to her citizenry; the greatest asset of every country is her men and women. This thought, old as Greece, has not yet had its proper effect in Canada, or indeed in any country. Were half the attention paid to men that is paid to horses, cows, pigs, our land would gain by millions of dollars every year.

We are straining every nerve and spending vast sums to bring into Canada new inhabitants; and we carefully see to it that none are admitted but those free from disease. And that is well.

But the best immigration and the immigration that Canada must in the long run rely upon is immigration by the cradle, and surely that immigration demands and should receive as much care and attention as immigration by the steamship. What would the Canadian people say if one out of every ten immigrants died within a year of their arrival? And yet that is well within the percentage of deaths within one year of their birth of our Canadian baby immigrants. One out of forty dies at birth, 10,000 within a week and 5,000 more within the year. Nor does the mother escape; one out of every twenty births means a dead mother. Proper care would reduce the appalling number of 370 dead mothers in Ontario in 1922 by more than three-fourths.

This apparent indifference to human wastage does not cease with such instances. As the child grows up he is subjected to wholly unnecessary infection. Parents and the public too often say: "Oh, let him have measles, scarlet fever, and have them over with". These diseases,

measles, scarlet fever, diphtheria, are practically wholly unnecessary. Not so long ago it was thought that everyone should have smallpox, and it was comparatively rare that a face was without pockmarks. A Queen Mary of England died of smallpox, and no one was astonished. If the present Queen Mary were to die of smallpox—or even to be infected with smallpox—the whole world would be convulsed, and some one would be severely punished. No one has smallpox now, and in my fairly long life I have seen only two persons pockmarked.

There is no more reason for diphtheria than there is for smallpox; and yet in Canada there are some 13,500 cases per year and 1,200 die.

Scarlet fever is largely an infant killer. Let a child escape until he is five, and even if he takes it, he has a strong chance of recovery without the deafness and other ills which so frequently follow. There are not far from 15,000 cases in Canada every year, and over 325 deaths.

Returning to our immigrants, would it not be the height of folly to spend money on importing them, and then force them to live where they must become diseased and some die?

The suffering caused by disease is appalling—not only the pain endured by the sick, but the labour and anxiety of the family, the wastage of the family funds, the hardships of wife and children deprived of the earnings of the bread winner. A working man stops working; his wages as a rule also stop. Often there is little or no reserve fund to draw upon, and the result requires no effort of the imagination to picture. More than half of the illness which disables from work is preventable, for most of it comes from outside sources and should not have come at all. And the number of those unable to work is not trifling. Not far from 180,000 persons are on the sick list all the time—over 50,000 men amongst them and as many women. If we were to get rid of preventable disease, over 10,000,000 working days per annum would be saved, 10,000,000 days' earnings would be made, and Canada thereby the richer, better and happier.

It has been estimated, and the estimate is well within the mark, that Canada loses \$270,000,000 every year through sickness—about \$30 for every man, woman and child in the Dominion. This does not take into account the \$180,000,000 of capital sunk in permanent buildings, hospitals, asylums, sanitariums, the annual cost of running which is over \$50,000,000 per annum.

Then, too, there are Mothers' Allowances, largely due to young widows who have lost their husbands, often in the prime of life, through preventable disease; in Ontario we pay nearly \$2,000,000 every year in this way alone.

Death comes to all soon or late, but surely we should for every reason give to every Canadian as long a lease of life as possible.

Some of the worst red slayers of the past have been overcome; some of the present must be met. For every case of typhoid it is said some one should be hanged, for every case of typhoid is due to some one's negligence, and this negligence is in many instances due to ignorance. The 400 lives sacrificed to typhoid alone would, if saved, largely repay the cost of preventing it altogether and save 5,000 from the disease every year.

And it is not alone in typhoid that ignorance is the great enemy; it is ignorance that must be met and overcome in all matters of public health. Once the tremendous importance of the health of the people is thoroughly appreciated, all means will be used to assure it. That is a matter of education, continual and exhaustive; and such education is undertaken by the Canadian Social Hygiene Council.

We cordially invite the assistance of all Canadians in this significant and important movement—all who will may help—and the means of helping will be given to all who will put themselves in communication with the Council at 40 Elm Street, Toronto.

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### The Church as a Community Centre

Rev. Ronald MacLeod, Rosedale Community Church, Toronto.

THE Church of Christ began as a community centre. It was a gathering or a society of adults and children who believed in the ideals, leadership and salvation of Jesus Christ. Its centre of attraction and inspiration was the memory and spiritual presence of One who made Love supreme in every human relationship and regarded little children as heirs and exponents of His Kingdom.

The Church was the only community centre in which differences of race, language and government were fused into a new loyalty to a spiritual presence and a new brotherhood, which overleaped all barriers of class, colour and creed. It was in such community centres that the Kingdom of God on earth first found visible expression.

It is not within the scope or purpose of this address to review the changes and processes of which, in innumerable instances, the church became a divisive force rather than a uniting power in many communities. But history affords ample proof that in every such instance the change was due to the denial or the suppression of the real nature and teaching of the church herself. In spite of all the failures and divisions of the past, the church still remains a most potent factor in the shaping of

character and in diffusing the spiritual light and the moral antiseptic of society.

The Church as a community centre is called upon to direct and safeguard four basic instincts of human nature, namely—1, the Play instinct; 2, the Social instinct; 3, the Sex instinct; 4, the Religious instinct. The church that neglects its direction and protection to any one of these is failing in its mission in the world.

The play instinct is the first to emerge. It is the child's way of finding his powers, and using them in the interests of a character, which he is gradually building up. "The value of play", said Dr. Finley, associate Editor of the New York Times, "is that in most of its expressions, quite apart from the physical value of the exercise, it is teaching honesty, courage, fairness, quickness of decision, self control, resourcefulness, loyalty. It teaches us to play the game of life honourably and bravely". It is, therefore, in the highest interests, not only of the physical, but of the moral and the spiritual that the play instinct be directed toward this end. That is surely a worthy aim for the Church of God.

Then the natural development of the play instinct leads to the exercise of the social instinct. The child begins his play as a rank individualist, but soon the social urge asserts itself, and the child seeks company in his play. When the church learns how to direct and control this instinct in the interest of the Kingdom of God on earth, the secret of Community Welfare, true democracy and altruistic service, will become clearer, and the religious spirit will have a stronger foundation to build upon.

With the development of the social instinct comes that most perilous and purposeful of all instincts—the sexual. In this regard the Church, the state, the home, and the school must honestly plead guilty to the charge of wilful and ruinous neglect of information and wise counsel. The first responsibility lies upon the parents. But the church that fails to teach the boys and girls the sacredness of the body, the meaning and purpose of these physical powers with which they are endowed, the moral, physical, and spiritual consequences of their abuse, is not fit to have the oversight of the welfare of her children. Much of the world's domestic sorrow and infelicity might have been avoided by the importing of true and reverent information at the proper time. On this point alone the Social Hygiene Council justifies itself as an important factor in the Kingdom of God in this land.

But the highest and noblest instinct of human nature is the religious—the sense of God and human relationship. It may appear very early. It usually does. But it becomes most vivid and intense during early adolescence. It is, of course, the privilege and the duty of the church

to minister to and direct this instinct particularly. But if the other three have been misdirected or misunderstood or abused, what chance has the religious to ripen into perfect fruit? "If the foundations be destroyed what can the righteous do"? Hence the church that desires above all else to minister to the spiritual needs of a community is the church that should be most diligent in guiding and directing and training for the purposes of Citizenship, Parenthood and Christian service, the play, the sexual and the social instincts of its young. If this be so, it follows that a church gymnasium may be a means of grace, if properly conducted, that a social party in connection with a church where boys and girls play and have a good time may be laying a foundation for spiritual character, that even a dance under wise and tactful leadership may be a safe and healthy expression of the natural joy and physical energy of youth, which if suppressed in this direction will express itself in more harmful ways.

But the supreme business of the church is to direct her young people to a realization and a recognition of God in all their interests. We have no right to expect that result if we neglect to guide their activities in the most formative and impressionable period of their childhood.

If the church is to prove itself as the logical community centre for the needs of old and young and the Kingdom of God, it must be marked by certain working principles.

1. It must seek to destroy the barriers that keep people apart, rather than setting them up. The world to-day is yearning and straining for two great blessings, namely, Peace and Unity. Any church or people that stands in the way of this realization is blocking God's way in the world.

The barrier to the unity and peace of the early church was of a serious nature and long standing. It was racial, and that has always been a serious barrier. But Paul preached a message which united Hebrew restraint, Greek culture, Roman law and order in a new citizenship of the Kingdom of God.

It was national. There again the barrier was almost insuperable, and yet it was overcome. And what hope is there for the future of our own Dominion but in the spirit which overleaps all national and ecclesiastical prejudices and traditions in the larger interests of our own country and its service to the world?

The barrier was cultural: the Jew with his exclusiveness and moral passion; the Greek with his love of life, his love of art, his cosmopolitan sympathies and his many gods. It was linguistic. Hebrew was the language of religion and prophecy; Greek was the language of science and speculation. But the Cross of Christ speaks a language that all

mankind can understand. The barrier was religious—the most stubborn of all barriers. But love and the Cross fused their differences into a new faith and service for mankind.

It is only our miserable divisions in large and small communities that can give any justification to the charge of H. G. Wells—"I think the world is finding its way to God in spite of the intervention of the churches."

While I do not regard H. G. Wells as a competent authority on religion, I have no doubt that his charge could be substantiated in many instances. As Maeterlinck says: "A truth that disheartens because it is true is still of more value than the most stimulating of falsehoods". The Church can be a community centre only when it can demonstrate Christian unity.

2. The Church as a Community Centre must have the power of adapting itself to various and changing needs. The population of Canada represents 60 nationalities, who speak 78 languages. The Presbyterian Social Centre in Winnipeg, the Robertson Memorial Institute, serves the needs of 16 nationalities, while no less than 28 nationalities are represented in the Mission Sunday School. No Church can adequately meet the needs of these various peoples and races without change of methods and procedure. It cannot be bound by outworn methods and hoary traditions. The Church is a living organism, and where there is life there is constant adjustment, movement and progress.

3. How may the barriers of race and language and religion be overcome so that unity and fellowship may prevail? The first step was taken by the Creator Himself in the coming of Jesus as the Head of a new race—a new order of humanity. In Him the best qualities and the brightest hopes of all races are blended. But this example, glorious as it was, could not have destroyed the barrier without the Cross. It required the love, the service and the Sacrifice of Calvary.

Barriers are not removed by argument or legislation, but by love in action. The best way sometimes to destroy a prejudice is to respect it. It is surely the mission of the church to destroy barriers which keep races and peoples apart from fellowship and cooperation.

Some years ago a serious menace and barrier to the navigation of the East River, New York City, was destroyed and removed. It was a formidable rock. After many months of preparation and the placing of tons of explosives, the engineer in charge directed his little girl to press an electric button, and instantly the age-long rocky barrier was broken into pieces, and thus opened the way for the commerce of the world. Similarly when we have done our best to remove age-long barriers of race and creed, we shall find that it is really the vital spark

that even a little child can command that is the secret of all success. It is the vital spark of love, human and divine.

Jesus destroyed the barriers between man and man. Any that remain must be of our own making. Kipling expresses the matter in his own typical way when he says:

"O East is East, and West is West,  
And never the twain can meet,  
Till Earth and Sky meet presently  
At God's great judgment seat.  
But there is neither East nor West,  
Border, Breed, nor Birth,  
When two strong men meet face to face,  
Though they come from the ends of the Earth".

4. The Church as a Community Centre will hold its building and equipment for the benefit of the whole community, and set an example of cooperation and tolerance in every worthy endeavour. In the United Church of Rosedale, for instance, we have a membership of five hundred and fifty, representing five communions, and yet so working together in such harmony that the denominational question has never caused any disagreement. That is certainly something to be proud of in these days of religious arguments and disputes. Of course the retort may be made that peace may sometimes be the sign of stagnation and death. That may be so, but in reality it is the sign for us of

"Such a tide as moving seems asleep  
Too full for sound and foam".

In addition to the regular services for worship and religious teaching of the young, our parlours and gymnasiums are used by six community organizations: patriotic, recreational, educational, and charitable, without any charge or test except the proper care of the building. The result is that many who were not church-going people come to share its work and fellowship and ultimately its vision and hope.

The Church as a Community Centre will greatly help to unite all classes and ages in a league of fellowship and service. "Tell Mr. Horne", said the Bishop of London in reference to some bit of work for social settlement in which the churches united—"Tell Mr. Horne we can always win when we are united". Divide et Impera. "Divide and rule" was the motto of the Roman emperor, and it played havoc with the enterprise of the Christian Church. When churches are quarrelling, the Devil splits up our forces, and beats us in detail. That was the favourite strategy of the conquering Napoleon. But united action and purpose put even Napoleon out of the business of war.

5. The Church as a Community Centre must hold convictions which cannot be compromised. Indeed that is her only hope and value as a centre of interest and activity. Behind all Christian divisions there is a great common unity on essentials which is capable of uniting us all. Take, for example, our hymns of praise in all the churches. In every service we sing and emphasize the communion of saints, whatever we do when we get outside. "Lead Kindly Light" is often sung in all the churches, Protestant and Catholic, and when we lift our voices to its strains we are led in thought by Cardinal Newman—the Anglican priest who became the Roman Catholic Cardinal. When we desire to express the glory of the cross, we often sing "In the Cross of Christ I Glory", without thinking that it is the thought of Sir John Brown, the Unitarian, that we express in song. Isaac Watts, the Independent preacher, who wrote "O God Our Help in Ages Past", was never asked or permitted to preach in Westminster Abbey; but there is scarcely any great occasion of Church or State within that same Abbey or in all our churches when that hymn is not sung. Poetry, the language of the heart, unites us all; Logic, the language of the head, often divides us, and, as someone said recently, "Logic has often been the last resort of a bewildered faith".

What, then, are the lessons that we have learned from the Church as a Community Centre? 1. That the unity of people who differ in many respects is both possible and practical. 2. That it is the business of the church to exemplify and declare the message which makes for unity and destroys the barriers which keep people apart. 3. That most serious obstacles may be removed by faith and obedience. 4. That the hope of the world and the secret of lasting peace is in Him of whom it is written, "He is our peace, who has made both of us a unity and destroyed the barrier which kept us apart". "If", said George Macdonald, "I can bring one rosy ray of sunset into the life of any man or woman I shall feel that I have worked with God". That is surely the work of the Church as a Community Centre.

"He serves his country best

Who lives pure life and doeth righteous deed,  
And walks straight paths, however others stray,  
And leaves his sons, as uttermost bequest,  
A stainless record which all men may read.

This is the better way.

No drop but serves the slowly lifting tide;  
No dew but has an errand to some flower;  
No smallest star but sheds some helpful ray,  
And, man by man, each helping all the rest  
Makes the firm bulwark of the Country's power.

There is no better way".

# Sanitary Inspectors' Association of Canada

## THIRTEENTH ANNUAL REPORT OF THE EXECUTIVE COUNCIL, YEAR ENDING JUNE 30, 1925.

THE Executive Council desires to place before the members the following report for the year ending June 30th, 1925.

Our last annual convention was held in Fort William, Ontario, on September 3rd, 4th, and 5th, 1924. A very good programme of papers and visits of inspection was arranged, and the sessions throughout were very interesting and instructive. We were sorry that the attendance was smaller than usual. This was not because of lack of interest in the individual members, but was due, as one speaker said, to the want of foresight on the part of the City Councils in not making it possible for their inspectors to share in the good that is to be derived from such gatherings. We wonder how long it will be before our civic authorities will wake up to the importance of providing their inspectors with the opportunity of meeting together to discuss problems met with in our daily work, problems of great importance and interest to the whole community.

We desire to express appreciation of the splendid work done in connection with the last Convention by Mr. A. J. Bolus of Fort William. Alderman Looney, who was Chairman of the Health Committee, also gave us help and was himself present at all the meetings.

The following is a statement of our membership for the past two years:—

At June 30th, 1924, our membership was:

Ontario .....	members	5;	assoc. members	5;	a total of	10
Manitoba .....	"	24;	"	3;	"	27
Saskatchewan .....	"	17;	"	1;	"	18
Alberta .....	"	19;	"	3;	"	22
British Columbia ....	"	1;	"	—	"	1
		—		—		—

A total of ..... members 66; assoc. members 12; a total of 78

At June 30th, 1925, our membership was as under:

Ontario .....	members	6;	assoc. members	4;	a total of	10
Manitoba .....	"	24;	"	4;	"	28
Saskatchewan .....	"	16;	"	—	"	16
Alberta .....	"	10;	"	2;	"	12
British Columbia ....	"	1;	"	—	"	1
		—		—		—

A total of ..... members 57; assoc. members 10; a total of 67

It will be seen that there is a reduction of eleven from last year's report. The falling off is most noticeable in the Province of Alberta. It may be that some of the members are just careless in sending their annual subscriptions and that this will be rectified later. We hesitate, however, to include a member whose fee is more than a year overdue. We have included a number of members whose subscription for this year is still unpaid.

Two important resolutions were passed at last year's annual meeting, one calling for a better security of tenure of office for Health Officers and Sanitary Inspectors, and another pointing out the difficulty of providing efficient and progressive Health work in rural districts, and suggesting the dividing of each Province into Health Districts with properly qualified, whole-time Health Officers and Sanitary Inspectors for each district. These resolutions were sent to all the Provincial Boards of Health in Canada. The Provincial Board of Manitoba replied that the system of Health Districts is not practicable just now until the financial condition of the municipalities improves. They do not think that the security of tenure proposed would be satisfactory to local authorities, fearing it would be construed as an attempt at interference with the autonomy of the municipalities.

Dr. Seymour, Deputy Minister of Health for Saskatchewan, replied approving both resolutions and stating that their incorporation into the health legislation of the different Provinces would be a valuable addition.

Dr. Laidlaw, Deputy Minister of Health for Alberta, replied that he agrees entirely with the principles enunciated in both resolutions.

Dr. Young, Provincial Health Officer for British Columbia, replied at length, approving the resolutions, but pointing out some of the difficulties owing to sparse settlement in that Province. Dr. Young states that he has been working towards the objectives indicated in the resolutions, and that he will do anything he can to bring about the desired results.

Dr. Melvin, Chief Medical Officer for New Brunswick, wrote that his Province is the only one which is divided into districts and the Health Officers paid by the government. (N.B.) The report for the Province shows that there are 16 districts and 134 local Sanitary Inspectors. These men, although paid by the Government, apparently only receive a mere pittance as part-time officers. The Province would be better off with a much smaller number of properly qualified, whole-time Inspectors.

Dr. Jost, Provincial Medical Officer for Nova Scotia, replied, giving a general approval to the resolutions.

Dr. E. Pelletier, Secretary of the Board of Health for the Province of Quebec, wrote acknowledging receipt of the resolutions and promising to lay them before his Board. Dr. Pelletier states that for a long time

he has been working to bring about a more efficient inspection system in rural districts.

Ontario and Prince Edward Island were not heard from.

Amendments to the Constitution and Bylaws were passed regarding the course to be pursued with members in arrears for subscriptions; and also providing that in the case of members joining after September 1st in any year and paying the fee for that year such subscription should keep them in good standing until December 31st of the following year.

At the last session of the Manitoba Legislature the question of adequate inspection of mining, lumber and other camps came up. It was proposed that the Provincial Bureau of Labour would supervise these camps. Your Executive at once made such representations as resulted in the supervision of such camps being placed under the Provincial Board of Health where it properly belongs, and the Provincial Board of Health made and promulgated regulations similar to those in force in Ontario.

In March we received the resignation of Mr. H. S. Sturgess of Vancouver, Branch President for British Columbia for several years. Mr. Sturgess was present at a meeting of the Executive Council as he passed through Winnipeg on his way to England, where he will reside in future. We took the opportunity of thanking Mr. Sturgess for the active support he had given us for so many years and wished him good luck in the name of the Association.

Mr. Thomas Watson of Regina, who was for many years in the Department of Health of the Province of Saskatchewan, and who may be called the father of the Association, was compelled through ill-health to retire during the year. He has gone to Victoria, B. C., to live, and we hope that he may be able to do some good for our Association at the coast.

Your Secretary received some interesting correspondence and printed matter from the Sanitary Inspectors' Association of New Zealand through Mr. E. C. Alexander of Wellington, New Zealand, the Secretary of that Association. Dr. Alexander was formerly one of our members, stationed, we believe, at Calgary. The printed matter consists of Journals of their Annual Conventions and also of the Review, the official organ of their Association, printed by themselves. Apparently they have a flourishing Association about as large as our own. We think that fraternal greetings should be sent from our Convention to our brothers in New Zealand. Incidentally, the reports disclose the existence of a Sanitary Inspectors' Association in South Africa. In both these places they evidently experience something of our own difficulties in operating in large and sparsely settled countries. They are not, however, dis-

couraged, and this fact should lead us to use even stronger efforts to make our Association embrace every Sanitary Inspector in Canada.

Your Executive has heard with deep regret of the illness of Mr. W. F. Thornley of Hamilton. Mr. Thornley fully intended to be present at our forthcoming Convention. We hope that he may speedily recover.

We desire to express our sincere appreciation of the work done by the Presidents and Secretaries of the Local and Provincial Branches, and of all others who have in any way helped forward the work of the Association.

We wish also to record our thanks to Dr. Bates, Editor, and Miss Ferris, Secretary of the Public Health Journal, for their assistance during the year. We have received courteous treatment and given ample space for our articles and news jottings.

The usual financial statement, prepared by the Secretary-Treasurer and certified correct by the Auditors for the year, Messrs. J. Arkle and G. Hanby, is attached hereto, from which it will be seen that there is a balance in the Bank and on hand amounting to two hundred and nine dollars and fifty-six cents (\$209.56).

Respectfully submitted,

(Signed) ERNEST W. J. HAGUE, *President*.

(Signed) ALEXR. OFFICER, *Secretary-Treasurer*.

**Statement of Receipts and Disbursements, 1st July, 1924, to  
30th June, 1925**

<i>Receipts</i>			
To Balance in Bank and on		tending Annual Conven-	
hand at June 30, 1924..	\$210.19	tion .....	50.00
Subscriptions received ..	200.00	Honorarium to Secretary-	
Interest on Bank account	3.07	Treasurer .....	50.00
		Mimeographing circular	
		letters .....	9.62
	\$413.26	Sundry expenses incurred	
		at Convention .....	7.00
		Printing letter - head	
		paper, envelopes, etc. ....	17.85
		Postages, etc. ....	16.23
		Balance in Bank and on	
		hand .....	209.56
			<hr/>
			\$413.26
<i>Disbursements</i>			
By Subscription to Canadian			
Public Health Associa-			
tion .....	\$ 3.00		
President's expenses at-			
tending Annual Conven-			
tion .....	50.00		
Secretary's expenses at-			

We have examined the accounts of the Treasurer of the Sanitary Inspectors' Association of Canada, from 1st July, 1924, to 30th June, 1925; compared the Cash Book with the vouchers and instructions and found the whole correct; and we certify the foregoing to be a correct abstract.

Winnipeg, Manitoba, July 23rd, 1925.

(Signed) G. HANBY,

JAS. ARKLE, *Auditors.*

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#### ONTARIO BRANCH

Sudbury, Ont.,

August 11th, 1925.

To the President and Executive Council, Sanitary Inspectors' Association, Winnipeg, Man.

Dear Sirs :—

In reference to your recent letter of July 30th re Annual Report for the past year as Vice-President of your Association in Ontario.

Outside of my recent report under date of May 28th on our first and only meeting, throughout the year there has been no further activities worthy of mention. I have personally interviewed a number of Inspectors and discussed the objects and advantages of the Association, but without any success in increasing the membership. I have also sent out a number of letters to Inspectors, who I thought might be interested, throughout the year without any very satisfactory results, and unless a more active campaign than I can afford time to organise and put into effect is carried out, our Branch in Ontario here will be small. At our annual meeting on the 19th, 20th and 21st I would like the Ontario men to get together and decide a Vice-President who could devote more time to this work of organization and make an annual programme of work to be carried out throughout the following year and appoint their full Executive at the same time to see that the work is carried out.

I would strongly recommend that the Executive be members from old Ontario in preference to the Northern Section owing to the number of full-time Inspectors employed further south. This I think would have a tendency to cause more interest in the Association.

Yours very truly,

(Signed) DAVID MCKEE,

*Provincial Sanitary Inspector.*

## MANITOBA BRANCH

Winnipeg, Man.,

August 12th, 1925.

Alex. Officer, Esq., General Secretary, Sanitary  
Inspectors' Assoc. of Canada.

Dear Mr. Officer:—

We have pleasure in submitting the Annual Report of the Manitoba Branch for the year 1924-5.

A comparison of the branch syllabus for a number of years is of interest. For example, the syllabus for 1915-16 shows twenty-eight meetings with a wide range of subjects, the great majority of which were treated by members of the Health Department staff. The programme for 1919-20 included nineteen meetings, about 50% of the topics being led by members of the staff. In 1922-23 sixteen meetings were held, and the majority of the papers were given by men outside the Health Department. Fifteen meetings were held in 1923-24, with a still greater proportion of the subjects conducted by outside men.

The syllabus of the year just completed shows fifteen meetings, and only one, viz., 31st January, 1925 (the speaker being Mr. E. W. J. Hague), was led by a member of the staff Inspectors.

This hurried comparison seems to indicate two things: 1st, an inclination to a continued decrease in the number of meetings held; and, 2nd, a marked disinclination on the part of the local Inspectors to lead in discussing subjects pertaining to their work. Whether this is a sign of progress or of retrogression is determined largely by the point of view taken of the whole period and by the general results obtained. It may be that the earlier enthusiasm has cooled in the passing of the years, and there is required an infusion of new interest or an enlargement of vision which may rekindle the old optimism.

On the other hand, we believe there is a general demand for the latest and best information, and that from the highest obtainable authorities, upon the details of our complex work.

Notwithstanding this, however, the syllabus of the session just closed was of considerable interest, had a fairly wide range of subject matter, and was handled by experts in their various lines of experience.

The lack of funds seems to be a continual and serious handicap, there being no source of revenue available for branch work. We are still looking forward to a time when the Association as a whole, and the Manitoba Branch in particular, will become the broadcasting station for the Dominion for news and practical information on sanitary work and public health matters.

The retiring officers thank the members for the honour and privilege of service during the past year, and express the hope that greater success and progress may attend the forthcoming session.

We also trust that the 1925 Convention will prove to be the best in the history of the Association.

(Signed) A. PAULL, *Vice-President.*

ALEX. BARCLAY, *Secretary.*

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#### ALBERTA BRANCH

Edmonton, Alta.,

August 6th, 1925.

To the Secretary and Executive, Sanitary Inspectors'  
Association of Canada.

Gentlemen:—

I have the honour to submit the report for the past year on the activities of the Alberta Branch.

During the past year two of our members have been retired from the Provincial Service and two have left the province to take up residence elsewhere.

The retiring of above-mentioned members has not tended to bolster interest in our Association, as was proven by questions asked by the prospective candidates for the examination of the Royal Sanitary Institute set for May last, and although arguments may be put forward, this action has had a bad effect on some of our members.

As I have previously written you, I am using all effort to institute meetings, and hope to be successful during the coming winter months. You may realize that this is a hard matter to bring about owing to the scattered membership in the province, but I am still of the opinion that with these meetings started, interest will be revived and members will recognize the benefits to be derived from same.

The magazine is received by the majority of our members, and very favourable remarks passed on items of interest published. Reports from Calgary are favourable, although no meetings are being held.

Trusting the convention will be a success and hoping all have a happy time with greetings from the Alberta members.

Respectfully submitted,

(Signed) G. P. HEAD,

*Branch President.*



## The Provincial Board of Health of Ontario

**Communicable Diseases reported for the Province for the Weeks  
ending September 5th, 12th, 19th, 26nd, 1925**

COMPARATIVE TABLE

Diseases	1925		1924	
	Cases-Deaths		Cases-Deaths	
Cerebro-Spinal Meningitis .....	4	1	7	7
Chancroid .....	—	—	—	—
Chicken Pox .....	88	—	106	—
Diphtheria .....	271	16	183	6
Dysentery .....	—	—	—	8
Encephalitis .....	9	1	5	5
Gonorrhoea .....	134	—	175	—
Influenza .....	—	10	6	1
German Measles .....	1	0	6	—
Measles .....	59	—	233	—
Mumps .....	29	—	100	—
Paratyphoid .....	—	—	3	—
Pneumonia .....	—	85	—	82
Poliomyelitis .....	37	—	35	2
Scarlet Fever .....	162	5	195	1
Septic Sore Throat .....	4	—	6	—
Small Pox .....	25	—	13	—
Syphilis .....	79	—	85	—
Tuberculosis .....	148	62	119	61
Typhoid .....	130	8	114	13
Whooping Cough .....	295	7	225	5

The following places reported cases of Small Pox: Kitchener 5, Kemptville 2, Trenton 4, Nicholl Tp. 4, Elora 8, Fergus 2.

JOHN W. McCULLOUGH.

## Monthly Jottings of The Sanitary Inspectors' Association of Canada

The Annual Convention held at Winnipeg in August was one of the most important and interesting we have had. The sessions were held in the beautiful Parliament Buildings by permission of the Minister of Works, and the opening meeting was graced by the attendance of the Lieutenant Governor, Sir James Aikins; and the acting Mayor of the city, Alderman D. McLean. The Lieut. Governor's address was both interesting and instructive. At a later date we may publish it in full.

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The attendance, whilst not large, was thoroughly representative of the Provinces, there being delegates from as far East as St. Catharines, Ont., and as far West as Victoria, B. C. Quite a number of the delegates were present for the first time.

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We will not here print the programme of addresses and visits of inspection, because each member received a copy by mail; suffice it to say that each item was thoroughly enjoyed. The social events included a lunch tendered by the City Council, and these were well attended and much appreciated.

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It is indeed a great privilege and worth a good deal from an educational point of view to attend such a gathering. It is also well worth while for Municipal Councils and Provincial Authorities to afford their officials an opportunity of attending. The money is well spent, and no Public servant comes back to his home city without feeling benefited in every way by the opportunity of meeting a large body of men from all parts of the Dominion who are engaged in similar work to his own. We hope that the interest shown by City Councils and others in our work will be maintained and increased in the years to come.

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The President's address on his favourite topic, the necessity for Sanitary Inspectors keeping up with all new developments in Public Health work, was printed in the September issue of the JOURNAL.

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The following officers were elected:—President—E. W. J. Hague, Winnipeg, Man. Vice Presidents—Ontario, W. C. Millar, Fort William; Manitoba, J. Arkle, St. James; Saskatchewan, A. Wright,

Prince Albert; Alberta, G. P. Head, Edmonton; British Columbia, L. Robertson, Vancouver. Executive Council—Misses E. Russell, E. J. Wilson, and Messrs. A. Rigby, H. H. Marshall and A. Barclay. Secretary-Treasurer—A. Officer, Winnipeg, Man.

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The Report of the Executive Council appears in this issue, and next month we hope to publish a more extended review of the Convention proceedings.

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The Association sent fraternal greetings to the New Zealand Sanitary Inspectors' Association, having become aware of the existence of that body through the Secretary, formerly a Canadian Sanitary Inspector and one of our members, and also through the excellent JOURNAL the New Zealand Association publishes every two months.

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The gathering had a visit from Mr. P. B. Tustin of London, England. Mr. Tustin was formerly Chief of the Food and Dairy Division, Winnipeg, and one of our most energetic members. We were very glad to have this opportunity of renewing an old acquaintance and of hearing something about the work as it is carried on in England.

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We had present at the Convention a number of Public Health Nurses who have obtained the Sanitary Inspector's Certificate of the Royal Sanitary Institute and who have been elected to membership with us.

It is with deep regret that we report the death while in the prime of life of Mr. W. F. Thornley, Chief Sanitary Inspector of Hamilton, Ontario, and one of our Past Presidents. Mr. Thornley was present at the Fort William Convention last year, and had looked forward with interest to attending this Convention also; but it was not to be. Mr. Thornley was a man of most excellent attainments and qualifications—the best that the old country could give, supplemented by years of Canadian experience. His death is a great loss to our Association as well as to the City of Hamilton. He will long be remembered by those who knew him as a true friend and wise counsellor.

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After many years of desuetude as regards our Association, which was probably due to the mountain barriers, the Province of British Columbia has at last awakened. We had at the Convention Mr. T. Lancaster, Chief Inspector of Victoria, B. C., and, better still, we have taken in membership sixteen new members in Victoria, Vancouver City, and

North and South Vancouver. Mr. L. Robertson of Vancouver is Branch President and a Provincial Council has been formed and is getting down to work. We hope for great things from this new influx of members from the Far West.

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After an exciting contest as to whether London, Ont., or Brantford, Ont., should have the honour of being our next Convention City, Brantford finally won out.

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The Executive Council sincerely trusts that now the Convention is over, the various centres in the Dominion will get busy on their Winter programmes with the determination to make the Association a means of education to their members and a power for good in the Dominion. After all, it is in the local centres that the real lasting work must be done. Don't be content just to belong to the Association and depend on the Executive Council to keep things going, but help to make things go.

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## Editorial

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### LEGISLATION AND HEALTH

By the time this issue of the JOURNAL reaches its readers the Dominion election will be over, and if any further steps are to be taken in the direction of making plans for a more effective health programme the time will be ripe. The Government and members of Parliament will doubtless be in a receptive mood and ready to deal in a new and fresh way with the many important issues before the country.

One might as well face the fact that in the past members of Parliament have not treated health as a subject worthy of discussion on their part. The reasons for this are obvious. Information on methods of preventing disease, or indeed possibilities in that direction, have largely remained in technical hands, and few lay parliamentarians engrossed in their own occupations have had time to study the question, important though it is. In addition, the tendency in the Dominion Parliament is to discuss affairs of a more material type—affairs which the average man engaged in manufacture or trade can more readily understand. After all, matters affecting livelihood are likely to have first place.

It would appear, however, that the time has come for leaders and experts in the field of preventive medicine to point out to our legislators that a country is only as great as the human beings in the country, and that neither mines nor forests nor trade nor manufacture will avail us anything unless their development be the result of the health and vigour and character of a people. And even these material resources are developed as a means to the end that the people themselves may live.

Consideration for the people themselves should loom larger in the minds of legislators than consideration of anything else, and surely the first duty of Parliament should be to the physical welfare of the people. Therefore, it is to be hoped that in the new Parliament Health for the people as an end to be achieved may be brought forward for serious discussion. This end will only be achieved if those of us who know from our experience in the technical field of disease prevention how great are the results which may be achieved by organized effort, do our part in stimulating thought and action among the citizens in our own communities so that legislators in all parts of Canada may realize that this new subject should demand their serious consideration.

## PRIEST AND PHYSICIAN, NURSE AND SOCIAL WORKER

A gratifying and outstanding feature of twentieth century thought is the greater emphasis of the spiritual and the social. The inter-relation of body, mind and spirit is perhaps better realized than ever before, and all the world is thinking in terms of social service.

These truths play an important part in a sound and healthy development of the technique of the ministry of healing, as practiced alike in the homes of the people and in our hospitals. Priest and physician, nurse and social worker, all have their part, and that an important one to play. The most effective results will be secured when the important part that each should play is fully recognized, and that part carefully co-ordinated with the work of the others. All alike have committed to them "the ministry of healing," and complete success can only be secured by complete co-operation.

The minister of religion will in many cases aid those who come to him for spiritual advice by recommending amongst other things that they should also consult their family physician or perhaps a specialist. Much spiritual depression is often connected with mental disease, and a healthy soul normally demands a healthy body through which to function. What the physician may describe as the recuperative power of Nature, the parson perhaps more wisely attributes directly to Nature's God. To the sick the consolations of religion and the ministry of the Church, apart from distinctly and purely spiritual results (if indeed the spiritual can ever be thought of as apart altogether from the material), bring that peace of mind, that hopfulness of outlook, that patience and perseverance, that good-will to all mankind, which are such important and well-recognized factors in a satisfactory return to normal health. The sensible clergyman will always avoid tiring the patient and will wish to work in closest co-operation with the medical man.

The wise physician, recognizing the influence of mind over matter, of the spiritual over the material, will always welcome, and will often advise, the ministries of the Church for his patient. Some mental worry, based on some unrepented and unforgiven sin, may often be at the base of slowness of physical recovery, while religion may be the one great tonic needed to elicit from the patient the will to recovery. Sympathetic co-operation between the priest and the physician is invaluable.

While the physician or surgeon is the head of the healing art, its hands are surely the gentle hands of the skilled nurse. The doctor prescribes, the nurse ministers the remedy. Here again the most complete and friendly co-operation and mutual understanding is essential to complete success. The nurse's disposition, her character, her moral and

spiritual make-up, are factors of the deepest moment in the patient's recovery.

Theoretically the work of the nurse ends and that of the skilled social worker begins when the patient leaves the hospital or the sick room. In practice here again there must be the closest co-operation. We have long passed the time when chaplain or physician really imagined that the ministry of healing ended when the patient was discharged. Follow-up work to set the patient on his feet socially, to promote complete convalescence, and guard against a recurrence of sickness are recognized as essential. In this the clergyman and the social worker must co-operate, for there can be no complete physical, mental or moral rehabilitation without spiritual restoration. The skilled social worker will seek to gather all possible information about the patient from the physician, the nurse, and from the minister of religion, and then to co-operate with all in the process of social rehabilitation.

C. W. VERNON,

*General Secretary of the Council for Social  
Service of the Church of England in Canada.*

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